

### REMARKS

In this office action the Examiner has required corrections to the specification and has either objected to or rejected the claims in the Application. The Applicant addresses each of the Examiner's points below.

Regarding the corrections to the specification, the unnecessary second occurrence of the article "a" was deleted in the abstract at line 2. In addition, the priority claim in the first paragraph of page 1 of the specification was revised to correct the reference to prior non-provisional applications. Further, a Petition To Correct Reference To Prior Non-Provisional Applications under 37 CFR §1.78(a)(3) has also been submitted, in order to claim the benefit of the filing date of U.S. Application No. 09/322,700 filed May 28, 1999, now U.S. Patent No. 6,172,040.

Claims 3-8 and 10-20 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The following changes kindly suggested by the Examiner resolve the indefiniteness cited in the subject claims. In claim 3, the words "food product" having an antecedent basis in claim 1 replace the word "foodstuff." Similarly, in claim 10 the words "food product" replace the word "composition." In claim 14, the words "meat product" having an antecedent basis in claim 10 replace the word "composition." In claim 15, the words "food product" having an antecedent basis in claim 1 replace the words "meat product." Therefore the rejection of claims 3-8 and 10-20 for indefiniteness has been overcome.

Claims 1-8 and 12-18 were objected to because of several informalities. The following changes resolve the informalities raised by the Examiner in the subject

claims. In claim 1: the alternative article selection "a/an" replaces the article "a" in line 2 (where the article "a/an" precedes a list of adjectives modifying the noun "microbe"); a period followed by a comma replaces the comma after "Campylobacter spp"; the second occurrence of "Bacillus spp." was deleted; and, the second occurrence of "Cladosporium spp., Mucor spp., Rhizopus spp., Penicillium spp., Geotrichium spp., Sporotrichium spp., Candida spp." was deleted. In claim 2, the second comma after "putrefaciens" was deleted and the word "Enterobacter" replaced the misspelled word "Enterbacter". In claim 14, the word "of" was inserted before the word "lactoferrin" to complete the prepositional phrases. In claim 16, the word "microbiological" replaced the word "microbial" for consistency with the terminology used in claim 15 upon which claim 16 depends. Therefore the objection to claims 1-8 and 12-18 for informalities has been overcome.

Claims 2-8, 12-14, and 16-18 were objected to for improper dependent forms that failed to further limit the subject matter of a previous claim under 37 CFR §1.75(c). The following changes put the subject claims into proper dependent form. In claim 2, following the Examiner's suggestion, the word "Deniobacter" replaced the word "Deniococcus" (note that Deniobacter is the basonym of Deniococcus). Claim 17 has been cancelled and the microbe "verotoxigenic E. coli" referenced therein has been included in claim 1. Therefore the objection to claims 2-8, 12-14, and 16-18 for improper dependent claim forms has been overcome.

Claims 1-14 and 17-20 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-49, 51, and 56-203 of copending Application No. 09/980,062. A timely filed Terminal Disclaimer To Obviate A Provisional Double Patenting Rejection Over A Pending "Reference" Application (form PTO/SB/25 [09.04]) under 37 CFR § 1.321(c) for copending Application No. 09/980,062 is submitted herewith. Therefore the

provisional rejection of claims 1-14 and 17-20 for nonstatutory double patenting has been overcome.

Claims 15 and 16 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-49, 51, and 56-203 of copending Application No. 09/980,062 in view of Reimann et al. (U.S. Patent No. 6,291,003), Yuan et al. (U.S. Patent No. 6,066,348), or Newman (U.S. Patent No. 5,597,597). As mentioned above, a timely filed Terminal Disclaimer To Obviate A Provisional Double Patenting Rejection Over A Pending "Reference" Application (form PTO/SB/25 [09.04]) under 37 CFR § 1.321(c) for copending Application No. 09/980,062 is submitted herewith. Therefore the provisional rejection of claims 15 and 16 for nonstatutory double patenting has been overcome.

Claims 1-11, 13, 14, 17, 18, and 20 were rejected under 35 U.S.C. 102(b) as being anticipated by PCT/US00/14818 (WO 00/72690). In addition, claims 12 and 19 were rejected under 35 U.S.C. 103(a) as being obvious in light of PCT/US00/14818 combined with the knowledge of a person of ordinary skill in the art. Finally, claims 15 and 16 were rejected under 103(a) as being obvious in light of PCT/US00/14818 combined with Riemann et al. (U.S. Patent No. 6,291,003), Yuan et al. (U.S. Patent No. 6,066,348), or Newman (U.S. Patent No. 5,597,597). However, the present Application is herein amended to claim priority to PCT/US00/14818 under 35 U.S.C. 120 subject to the USPTO's favorable action on Applicant's petition under 37 CFR §1.78(a)(2) filed herewith concurrently. The Applicant reasonably expects that the petition will be granted and therefore that each of these rejections will become moot.

Claims 12 and 19 were rejected under 35 U.S.C. 103(a) as being obvious in light of Naidu (U.S. Patent No. 6,172,040) combined with the knowledge of a person of ordinary skill in the art. In addition, claims 15 and 16 were rejected under 35 U.S.C. 103(a) as being obvious in light of Naidu (U.S. Patent No. 6,172,040) combined with Riemann et al. (U.S. Patent No. 6,291,003), Yuan et al. (U.S. Patent No. 6,066,348), or Newman (U.S. Patent No. 5,597,597). However, U.S. Patent No. 6,172,040 issued from U.S. Application Serial No. 09/322,700 to which the present Application is herein amended to claim priority subject to the USPTO's favorable action on Applicant's petition under 37 CFR §1.78(a)(2) filed herewith concurrently. The Applicant reasonably expects that the petition will be granted and therefore that each of these rejections will become moot.

The examiner rejected claims 1-6, 17, and 18 under 35 U.S.C. 102(b) as being anticipated by Laufer, in view of the Harper *et al.* text, Okonogi *et al.*, and the Naidu *et al.* article. Reconsideration is respectfully requested. These references do not disclose a defined dispersion as is required by all of these claims. A defined composition is a composition whose constituents and their concentrations are known. For instance, the defined composition described in Table 2 of the parent application 09/980,062 is formed by diluting a 1% wt/vol mixture containing a combination of LF (1% wt/vol), galactose-rich polysaccharide (1% wt/vol), citric acid (0.001M), sodium bicarbonate (0.01M), sodium chloride, and deionized water to form a 0.5% mixture.

In marked contrast, Laufer merely discloses combinations of whole milk and meat products. Laufer does not define the composition of the whole milk used to make the combination. All of the components of the dispersion and their concentrations are not known. The Harper *et al.* text generally describes some of the major components of milk, including naturally occurring substrates. However,

Harper *et al.* do not attempt to completely define the composition of milk. Such an attempt would be futile, since milk is a very complex food containing over 100,000 different molecular species, the exact composition of which varies with the source. (See, for example, "Dairy Chemistry and Physics," University of Guelph, copy enclosed.) Similarly, while Okonogi *et al.* teach that lactoferrin is inherently present in milk, Okonogi *et al.* do not attempt to completely define the composition of milk. The Naidu article is cited because it teaches that lactoferrin complexes with casein,  $\alpha$ -lactalbumin, lysozyme, and IgA. It does not follow that because milk contains both naturally occurring substrates and lactoferrin, that the complex and variable composition of milk can be characterized as a defined dispersion. Therefore, the rejection of claims 1-6, 17, and 18 under 35 U.S.C. 102(b) as being anticipated by Laufer, in view of the Harper *et al.* text, Okonogi *et al.*, and the Naidu *et al.* should be withdrawn.

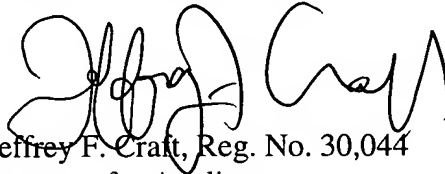
The examiner rejected claims 15 and 16, the claims additionally requiring at least one other microbiological decontamination intervention, under 35 U.S.C. 103(a), as obvious in light of a combination of Laufer, the Harper *et al.* text, Okonogi *et al.*, and the Naidu *et al.* article, along with Riemann *et al.*, Yuan *et al.* or Newman. Riemann *et al.*, Yuan *et al.* and Newman are cited merely because they teach the treatment of food products with at least one microbiological decontamination intervention. However, for the reasons discussed above, nothing in these references whether considered alone or in combination would have suggested the treatment of a food product with a defined dispersion of lactoferrin on a naturally occurring substrate. Therefore, the rejection of claims 15 and 16 under 35 U.S.C. 103(a), as obvious in light of a combination of Laufer, the Harper *et al.* text, Okonogi *et al.*, and the Naidu *et al.* article, along with Riemann *et al.*, Yuan *et al.* or Newman should be withdrawn.

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### **CONCLUSION**

In light of the foregoing amendments and remarks, as well the Terminal Disclaimer and Petition to Correct Reference to Prior Non-Provisional Application, it is believed that the application is in condition for allowance, so that a prompt and favorable action is earnestly solicited.

Respectfully submitted,



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Attachment: Paper on "Dairy Chemistry and Physics" by the University of Guelph (3 pages)